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A new step in Turkish higher education system: program outcomes

Işıl Kabakçı^a, Kerem Kılıçer^{b*}, Gürkay Birinci^b, M. Can Şahin^c, H. Ferhan Odabaşı^a

^aAnadolu University, Faculty of Education, Eskişehir 26470, Turkey

^bAnadolu University, Graduate School of Educational Sciences, Eskişehir 26470, Turkey

^cÇukurova University, Faculty of Education, Adana 01330, Turkey

Abstract

Within the last decade, along with Bologna process, qualification framework studies have been conducted in many countries in order to make higher education systems more transparent, qualified and comparable. – In Turkey, identifying and evaluating the results of the programs according to the needs and opinions of the partners will be basic steps for the accreditation process which is a new step for Turkish Higher Education System. This study aims to determine the program outcomes of CEIT department at Anadolu University in Turkey and to evaluate the program outcomes by view of the educational partners of CEIT to meet the needs mentioned. Survey method has been used in the research. Survey data was collected from 100 educational partners.

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1. Introduction

Educational institutions have great roles in training the individuals who can adapt to new and advanced technologies, think critically, have awareness of citizenship and who are creative, productive and respectful to human rights at the societies. The success of the society is proportional to the quality of education; and thus the quality of education is to the quality of teacher. As for the quality of teacher, it depends on the quality of teacher training. The aim of teacher training at higher education system is explained as:

To develop in each student his general education and personal culture, his ability to teach and educate others, an awareness of the principles which underlie good human relations, within and across national boundaries, and a sense of responsibility to contribute both by teaching and by example to social, cultural and economic progress (UNESCO, 2008, p. 25).

Teacher training politics is based on the requirement to equip the society with sufficient number of teachers who have desired knowledge and skills, essential ethical, intellectual and physical qualities. In line with these requirements, a rearrangement process of higher education system has been started at 21st century as appropriate to requirements of the era. The changes occurred at technological and social process has forced to transform higher

* Kerem Kılıçer. Tel.: +90 222 335 0580x3580; fax: +90 222 335 0579.

E-mail address: kkilicer@anadolu.edu.tr

education system to more transparent, qualified and comparable. In this context, Bologna process which aims to create a common higher education in Europe has been started.

The aim of Bologna process is to create a common higher education system in Europe, which is under quality assurance, student-centered, life-long learning-oriented and compatible with each other. Although the basis of the process laid to Sorbonne declaration in 1998, it was officially started with Bologna declaration in 1999 which was published with the signature of 29 ministers responsible of higher education at different countries. Then, with Prague (2001), Berlin (2003), Bergen (2005), London (2007) and Leuven (2009) and Budapest/Vienna (2010) declarations, the goals of Bologna process were detailed and expanded along with the participation 47 countries. As one of the fundamental activity area of Bologna process; “Qualification Frameworks” is among the studies with the aim to create a higher education system, which is particularly comprehensible, comparable and under quality assurance. In this context, through these studies, “Traditional system based on teaching inputs” yield to “System based on teaching goals”. As the first study conducted within the qualification framework, “European Qualifications Framework” was determined. For this, firstly within the overarching framework for qualifications of the European Higher Education Area (QF-EHEA) and European Qualifications Framework for Lifelong Learning (EQF-LLL), a comprehensive “Framework for Qualifications of the European Higher Education Area”, which covers all levels of higher education (associate degree, undergraduate, graduate) and which would be reference to national higher education qualification framework, was put forth. Then, the member countries conducted different qualification framework studies to define the knowledge, skill and competence that an individual graduating from a higher education degree should have. By means of these studies, higher education qualifications at national level, with determined relations between each other and accepted by national and international partners, were constructed. At the following stage, the member countries structured field based qualifications for basic areas by considering qualifications at national level. Thus, for each area, national higher education framework basic area related program was taken into account and structured according to partners’ opinions. At the stage after field based qualification, for the programs under each area, program based qualification/program outcomes were determined and programs were revised. The program based qualification/program outcomes are the statements defining the information, skill and competences that students are required to gain till graduation. Program qualifications can explain what a student knows, what he can do and what he is competent to when he graduates. In this process, the program qualifications are constructed through insider and outsider partners’ opinions and participations by considering the main aim and goals of the program and basic field based qualifications (Yükseköğretim Kurumu [YÖK], 2010a).

Turkey was involved in Bologna process with Prague Declaration in 2001. Although the membership to Bologna Process happens with freewill and it does not have any legal commitment, our country has put into practice all decisions accepted within the process in order to recover and develop the higher education programs in accordance with the partners’ expectations. Particularly since 2005, many studies have been conducted to enhance the quality of higher education process. In 2006, the “Qualifications Framework for Higher Education in Turkey (TYYÇ)” studies were started for four levels of higher education system and it was ended in 2010, then confirmed by the Council of Higher Education (YÖK) and implemented. For field based qualifications, “The International Standard Classification of Education (ISCED)” was taken as a reference. By means of working groups, for educational sciences, “Teaching Profession General Qualifications” and for Computer Education and Instructional Technology (CEIT), “Informatics Technologies Teacher Special Field Based Qualifications” were defined. After these studies, it is envisioned that all program outcomes and learning outcomes of all higher education institutions in Turkey would be completed by 2012 (Yükseköğretim Kurumu [YÖK], 2010b).

The aim of the present study is to determine the program outcomes and develop the program and course outcome matrix related to CEIT undergraduate program at Education Faculty at Anadolu University. Correspondingly, it is aimed to offer suggestions regarding lesson program at CEIT department. In this context, firstly, the draft program outcomes of CEIT undergraduate program was determined, then the final form of these qualifications were developed after the partners’ opinions were asked. Consequently, by developing the course and program outcome matrix, the results and suggestions were presented.

2. Method

The survey method was applied in this study to collect the research data. In line with the sub-goal, singular survey model was employed.

2.1. Participants

The study was conducted at Education Faculty at Anadolu University in the academic year of 2009-2010. The study involved totally 100 participants, which are, 16 instructors and 24 final year students at the Department of CEIT at Anadolu University, 50 grad students and 10 administrators of grad students.

2.2. Procedure

In the study, it was firstly aimed to construct the draft program outcomes. For this, three-staged process was carried out. At the first stage, the learning outcomes of 41 compulsory, 13 elective courses at the program were examined. Additionally, the report of “A Framework for Qualifications of the European Higher Education Area”, the report of “The Qualifications Framework for Higher Education in Turkey”, “Teaching Profession General Qualifications” and “Informatics Technologies Teacher Special Field Based Qualifications” were examined concurrently.

At the second stage, a workshop was organized in order to determine the draft program outcomes in accordance with the opinions and suggestions of the instructors at the Department of CEIT, Education Faculty at Anadolu University. In this workshop, brainstorming activities on draft program outcomes were carried out by Program Outcomes Committee of CEIT Department, which was established for this study, with the other instructors. In this way, each instructor's participation to the process of constructing the draft program outcomes were ensured and item pool for the outcomes were formed. At the end of this process, preliminary 37 program outcomes were constructed.

At the third stage, the program outcomes determined by the CEIT Department instructors were reexamined by Program Outcomes Committee of CEIT Department, conflicting or repeating program outcomes were determined and by integrating some program outcomes, a draft program with 30 items were constructed. In order to ensure the content validity of the draft program outcomes, the opinions of five instructors at CEIT Department (1 professor and 4 assistant professors) were taken. In accordance with the instructors' opinions, the number of items was decreased to 29 at the draft program outcomes.

2.3. Instrument

To take the partners' opinions about the draft program outcomes, questionnaire technique was used. Thus, in order to learn about each partner group (instructor, student, grad student and grad student volume manager) four different Likert type questionnaires with 29 items were developed on the basis of the draft program outcomes. Each questionnaire was designed as 5 point Likert type ranging as “Totally Inadequate”, “Inadequate”, “Average”, “Adequate” and “Totally Adequate”.

In data collection procedure, to reach more participants in a shorter time, the four different electronic questionnaires were prepared and sent to each partner group. The link of the prepared electronic questionnaires was sent as e-mails to the partners. To reach the grad students, their e-mails were taken from “Anadolu University Alumni Committee”, at the same time, the grad students volume managers were reached through these e-mails. The CEIT department final year students got the e-mails and completed the questionnaires at “BTO406-Teaching Practice” WebCT course.

3. Results

Before data analysis, 5 point Likert options; “Totally Inadequate” and “Inadequate” were merged under the title of “Inadequate” while the options of “Totally Adequate” and “Adequate” were unified under the title of “Adequate”. In this way, data analysis was based on the options of “Inadequate”, “Average” and “Adequate”. Furthermore, for each item, using the formula of $(n-1/n)$, standard opinion ranges were determined and opinion means for each draft program outcome was evaluated.

3.1. Findings for Program Outcomes

As a result of evaluation, it was detected that one program outcome was met inadequately, while three outcomes at average level, and 25 program outcomes were met adequately. In this context, the program outcome reported as inadequate was extracted from the draft program outcomes while for the three outcomes reported as at average level were rearranged. Consequently, the final version of Anadolu University CEIT Program Outcomes was presented at Schema 1:

The students, who graduate from CEIT Department, should acquire the following skills:		
Field-based Qualifications	Qualifications peculiar to Teaching Profession	General Qualifications
PO1. To be able to develop interactive teaching software	PO5. To be able to evaluate a student's success by using measurement and evaluation techniques	PO24. To be to obey the professional and ethical rules
PO2. To be able to develop educational web environment	PO16. To be able to develop teaching materials appropriate to teaching a subject-matter	PO 25. To be able to take charge in the cooperation based applications
PO3. To be able to write a computer program appropriate to the requirement for database applications using a programming language	PO17. To be able to use the method, techniques, equipment and materials appropriate to subject-matter teaching effectively	PO26. To be able to work interdisciplinary
PO4. To be able to install a web server covering database applications	PO18. To be able to arrange the activities for subject-matter teaching	PO27. To be able to adopt life-long learning
PO6. To be able to use office software (MS-Word, Excel, PowerPoint ...) at advanced level	PO19. To be able to prepare a teaching plan for subject-matter teaching	PO28. To be open to professional development
PO7. To be able to solve the problems encountered at computer network	PO20. To be able to conduct a study as appropriate to the stages of scientific research process	
PO8. To be able to use a system software (Windows, Linux, Pardus etc...) at advanced level	PO21. To be able to evaluate the accuracy and actuality of the information attained from different sources	
PO9. To be able to use a graphic operation software (PhotoShop, Fireworks, Freehand etc...) at advanced level	PO22. To be able to use a foreign language related to his profession at basic level	
PO10. To be able to use a learning management system software (Moodle, WebCT, Jumla etc...) at advanced level	PO23. To be able to produce the projects to solve the current problems of the society	
PO11. To be able to structure a computer network system		
PO12. To be able to solve the problems related to computer hardware		
PO13. To be able to design an education environment oriented to learners' needs		
PO14. To be able to lead the expansion of the education technologies		
PO15. To be able to integrate current information and communication technologies at learning-teaching process		

Schema 1. Anadolu University CEIT Program Outcomes

As a result of the study, as seen at Schema 1, 28 program outcomes of CEIT Department at Anadolu University were determined. Out of these outcomes, 14 of them are for informatics technologies special field, nine are for teaching profession knowledge and five are for general qualifications.

3.2. Findings for Course and Program Outcome Matrix

The course and program outcome matrix was determined by relating the qualifications that were finalized according to the partners' opinions with all courses at CEIT Department. In matrix construction process, the support level of each qualification taken its final shape according to the partners' opinions by the courses at the program was scored as “1=It supports inadequately”, “2=It supports averagely” and “3=It supports adequately” by Program

Outcome Committee of CEIT Department”. While scoring, workshop-activity forms, on which the instructors explained the contributions of their courses to informatics technology special area, teaching profession knowledge and general qualifications, were used.

When the matrix constructed as a result of matching the courses at the program with the program outcomes, out of program qualifications;

- 21 qualifications are emphasized adequately by the courses at CEIT Department
- 3 qualifications (*PO4*, *PO12* and *PO22*) are not focused adequately by the courses at CEIT Department
- 4 qualifications (*PO13*, *PO16*, *PO24* and *PO28*) are focused more by the courses at CEIT Department and met by most of the courses at the lesson program of CEIT Department

When the courses at CEIT program were examined, it was seen that 20 courses serve for different outcomes at different levels, 8 courses serve for different outcomes at the same level, 4 courses focus on a single outcome, and 14 courses serve to few outcome at different levels.

4. Conclusion

Consequently, it was realized that the courses at CEIT Department at Education Faculty at Anadolu University generally focus on the qualifications for teaching profession knowledge while the qualifications for the informatics technologies special area are less emphasized. Among the more focused qualifications, there are “to be able to develop teaching materials appropriate to teaching a subject-matter”, “to be able to design education environments oriented to learners’ needs”, “to be able to arrange the activities for subject-matter teaching”.

Additionally, it was observed that some of the qualifications within informatics technologies special area were not focused adequately; these were; (1) Management of database applications, (2) Solution of computer hardware problems, (3) Leading the expansion of technologies at education, (4) Using the Office software and operating system, (5) Using learning management system software, (6) Conducting a study as appropriate to the scientific research process, (7) Planning and applying a project, (8) Carrying out cooperation-based applications.

Since CEIT Department undergraduate program is determined by YÖK and compulsory to be applied all universities, it is impossible to change the lesson programs. Instead, it can be suggested to enrich the elective courses and to provide opportunities for students to choose courses from different programs. In this context, it can be suggested to carry out cooperation-based application at the courses focusing the qualifications at high level such as material development and educational environment designs, besides to focus on teacher qualifications at informatics technology area such as planning and applying projects, expansion of the education technologies, being a leader. Therefore, enriching the course contents according to these qualifications, and varying the courses by increasing the elective courses oriented to these qualifications and providing the option to choose the courses oriented to different skills at different areas would contribute to these suggestions. Considering this need, CEIT department has decided to add “Computer Hardware and Software Problems” and “Database Application” courses to the elective course pool.

Finally, to carry out the activities that would enable students’ active participation and support the qualifications, each department should plan their courses to meet the requirements.

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